

c 107 8.8 44.0 579 1 US-09-184-418C-75 Sequence 75, Appl
c 108 8.8 44.0 579 1 US-09-184-418C-84 Sequence 84, Appl
c 109 8.8 44.0 579 1 US-09-184-418C-84 Sequence 84, Appl
c 110 8.8 44.0 579 1 US-09-184-418C-93 Sequence 93, Appl
c 111 8.8 44.0 579 1 US-09-184-418C-102 Sequence 102, Appl
c 112 8.8 44.0 579 1 US-09-184-418C-102 Sequence 102, App

ALIGNMENTS

RESULT 1
JS-09-184-418C-44
; Sequence 44, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 44
; LENGTH: 2583
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene-env
JS-09-184-418C-44

Query Match 100.0%; Score 20; DB 1; Length 2583;
Best Local Similarity 100.0%; Pred. No. 0.34;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
|||||
Db 781 CTGTTAAATGGCAGTCTAGC 800

RESULT 2
US-09-184-418C-41
; Sequence 41, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 41
; LENGTH: 2640
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene-tat
US-09-184-418C-41

Query Match 100.0%; Score 20; DB 1; Length 2640;
Best Local Similarity 100.0%; Pred. No. 0.34;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
|||||
Db 1185 CTGTTAAATGGCAGTCTAGC 1204

RESULT 3
US-09-184-418C-42
; Sequence 42, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 42
; LENGTH: 2658
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=rev
US-09-184-418C-42

Query Match 100.0%; Score 20; DB 1; Length 2658;
Best Local Similarity 100.0%; Pred. No. 0.34;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
|||||
Db 1046 CTGTTAAATGGCAGTCTAGC 1065

RESULT 4
US-09-184-418C-4
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; 139.1624:gag; 1690.4428:pol(N-terminus uncert
; OTHER INFORMATION: 4373.4951:vif; 4891.5181:vpr; 5162.7801:tat; 5301.7958:rev;
; OTHER INFORMATION: 5403.5648:vpu; 5566.8148:env; 8150.8773:nef
US-09-184-418C-4

Query Match 100.0%; Score 20; DB 1; Length 8992;
Best Local Similarity 100.0%; Pred. No. 0.31;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
|||||
Db 6346 CTGTTAAATGGCAGTCTAGC 6365

RESULT 5
US-09-184-418C-89
; Sequence 89, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

```

; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 89
; LENGTH: 2544
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-env
US-09-184-418C-89

Query Match      92.0%; Score 18.4; DB 1; Length 2544;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

2Y 1 CTGTTAAATGGCAGTCTAGC 20
Db 781 CTGTTAAATGGTACTAGC 800

RESULT 6
JS-09-184-418C-98
; Sequence 98, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 98
; LENGTH: 2598
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-env
JS-09-184-418C-98

Query Match      92.0%; Score 18.4; DB 1; Length 2598;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

2Y 1 CTGTTAAATGGCAGTCTAGC 20
Db 793 CTGTTGAATGGCAGTCTAGC 812

RESULT 7
JS-09-184-418C-87
; Sequence 87, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 87
; LENGTH: 2631
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene-rev

```

```

US-09-184-418C-87

Query Match      92.0%; Score 18.4; DB 1; Length 2631;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1058 CTGTTAAATGGTACTAGC 1077

RESULT 8
US-09-184-418C-86
; Sequence 86, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 86
; LENGTH: 2646
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-tat
US-09-184-418C-86

Query Match      92.0%; Score 18.4; DB 1; Length 2646;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1197 CTGTTAAATGGTACTAGC 1216

RESULT 9
US-09-184-418C-95
; Sequence 95, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 95
; LENGTH: 2655
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-tat
US-09-184-418C-95

Query Match      92.0%; Score 18.4; DB 1; Length 2655;
Best Local Similarity 95.0%; Pred. No. 0.9;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
Db 1197 CTGTTGAATGGCAGTCTAGC 1216

```

```
RESULT 10
US-09-184-418C-96
; Sequence 96, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 96
; LENGTH: 2721
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene=rev
US-09-184-418C-96

Query Match          92.0%; Score 18.4; DB 1; Length 2721;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      1058 CTGTTGAATGGCAGTCTAGC 1077

RESULT 11
US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpw; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9

Query Match          92.0%; Score 18.4; DB 1; Length 8972;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      6365 CTGTTAAATGGTACTAGC 6384

RESULT 12
US-09-184-418C-10
; Sequence 10, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
```

```
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:"gag";
; OTHER INFORMATION: 1442.4453:"pol"; 4398.4976:"vif"; 4916.5206:"vpr";
; OTHER INFORMATION: 5187.7841:"tat"; 5326.8046:"rev";
; OTHER INFORMATION: 5428.5673:"vpw"; 5591.8188:"env"; 8190.8843:"nef"
US-09-184-418C-10

Query Match          92.0%; Score 18.4; DB 1; Length 9060;
Best Local Similarity 95.0%; Pred. No. 0.8;
Matches 19; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      6383 CTGTTGAATGGCAGTCTAGC 6402

RESULT 13
US-09-184-418C-62
; Sequence 62, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 62
; LENGTH: 2529
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene=env
US-09-184-418C-62

Query Match          87.0%; Score 17.4; DB 1; Length 2529;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCTAGC 20
Db      785 TGTAAATGGCAGCTAGC 803

RESULT 14
US-09-184-418C-18
; Sequence 18, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 18
; LENGTH: 2541
```

```
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; gene-env
US-09-184-418C-18

Query Match      87.0%; Score 17.4; DB 1; Length 2541;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
        |||||
Db       785 TGTAAATGGCAGCTAGC 803

RESULT 15
US-09-184-418C-60
; Sequence 60, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 60
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene-tat
US-09-184-418C-60

Query Match      87.0%; Score 17.4; DB 1; Length 2601;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
        |||||
Db       1189 TGTAAATGGCAGCTAGC 1207

RESULT 16
US-09-184-418C-15
; Sequence 15, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 15
; LENGTH: 2610
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; gene-tat
US-09-184-418C-15

Query Match      87.0%; Score 17.4; DB 1; Length 2610;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
```

```
Db       1186 TGTAAATGGCAGCTAGC 1204

RESULT 17
US-09-184-418C-61
; Sequence 61, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 61
; LENGTH: 2652
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene-rev
US-09-184-418C-61

Query Match      87.0%; Score 17.4; DB 1; Length 2652;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
        |||||
Db       1050 TGTAAATGGCAGCTAGC 1068

RESULT 18
US-09-184-418C-16
; Sequence 16, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 16
; LENGTH: 2661
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; gene-rev
US-09-184-418C-16

Query Match      87.0%; Score 17.4; DB 1; Length 2661;
Best Local Similarity 94.7%; Pred. No. 1.6;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
        |||||
Db       1047 TGTAAATGGCAGCTAGC 1065

RESULT 19
US-09-184-418C-6
; Sequence 6, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
```

```
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 6
; LENGTH: 8954
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; 142..1579:gene="gag"; 1437..4448:gene="pol";
; OTHER INFORMATION: 4393..4971:gene="vif"; 4911..5201:gene="vpr";
; OTHER INFORMATION: 5182..7782:gene="tat"; 5321..7972:gene="rev";
; OTHER INFORMATION: 5586..8114:gene="env"; 8116..8736:gene="nef"
US-09-184-418C-6

Query Match      87.0%; Score 17.4; DB 1; Length 8954;
Best Local Similarity 94.7%; Pred. No. 1.5;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      6370 TGTAAATGGCAGCTAGC 6388

RESULT 20
US-09-184-418C-1
; Sequence 1, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 1
; LENGTH: 8968
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369.4947:vif;
; OTHER INFORMATION: 4887.5177:vpr; 5158.7767:tat; 5297.7957:rev;
; OTHER INFORMATION: 5396.5641:vpu; 5559.8099:env; 8101.8727:nef
US-09-184-418C-1

Query Match      87.0%; Score 17.4; DB 1; Length 8968;
Best Local Similarity 94.7%; Pred. No. 1.5;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      6343 TGTAAATGGCAGCTAGC 6361

RESULT 21
US-09-184-418C-80
; Sequence 80, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 80
; LENGTH: 8954
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=env
US-09-184-418C-80

Query Match      84.0%; Score 16.8; DB 1; Length 2607;
Best Local Similarity 90.0%; Pred. No. 2.3;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      814 CTGTTAAATGGTACCTAGC 833

RESULT 22
US-09-184-418C-77
; Sequence 77, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 77
; LENGTH: 2666
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=tat
US-09-184-418C-77

Query Match      84.0%; Score 16.8; DB 1; Length 2666;
Best Local Similarity 90.0%; Pred. No. 2.3;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGCTAGC 20
      ||||| ||||| |||||
Db      1220 CTGTTAAATGGTACCTAGC 1239

RESULT 23
US-09-184-418C-78
; Sequence 78, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 78
; LENGTH: 2684
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=rev
US-09-184-418C-78

Query Match      84.0%; Score 16.8; DB 1; Length 2684;
Best Local Similarity 90.0%; Pred. No. 2.3;
```

```
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 1081 CTGTTAAATGGTAGCCTAGC 1100

RESULT 24
US-09-184-418C-8
; Sequence 8, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 9010
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651; 137..1621:"gag"; 1426..4425:"pol";
; OTHER INFORMATION: 4370..4948:"vif"; 4888..5178:"vpr";
; OTHER INFORMATION: 5159..5373-7734..7824:"tat"; 5298..5373-7734..7981:"rev";
; OTHER INFORMATION: 5387..5647:"vpu"; 5565..8171:"env"; 8173..8793:"nef"
US-09-184-418C-8

Query Match 84.0%; Score 16.8; DB 1; Length 9010;
Best Local Similarity 90.0%; Pred. No. 2.1;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 6378 CTGTTAAATGGTAGCCTAGC 6397

RESULT 25
US-09-184-418C-36
; Sequence 36, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 36
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene-env
US-09-184-418C-36

Query Match 76.0%; Score 15.2; DB 1; Length 2538;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 757 CTATTAATGAAGCCCTAGC 776

RESULT 26
```

```
US-09-184-418C-54
; Sequence 54, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 54
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene-env
US-09-184-418C-54

Query Match 76.0%; Score 15.2; DB 1; Length 2538;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 805 CTACTAAATGGTAGCTAGC 824

RESULT 27
US-09-184-418C-28
; Sequence 28, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 28
; LENGTH: 2550
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene-env
US-09-184-418C-28

Query Match 76.0%; Score 15.2; DB 1; Length 2550;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 CTGTTAAATGGCAGCTAGC 20
Db 772 CTGCTGAATGGCAGTTAGC 791

RESULT 28
US-09-184-418C-71
; Sequence 71, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
```

```

; CURRENT FILING DATE: 1999-11-02
;
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 71
; LENGTH: 2571
; TYPE: DNA
; ORGANISM: Human immunodeficiency
; FEATURE:
; OTHER INFORMATION: isolate=94CY
US-09-184-418C-71

```

Query Match 76.0%; Score 15.2; DB 1; Length 2571;
Best Local Similarity 85.0%; Pred. NO. 5.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0

QY 1 CTGTTAAATGGCAGTCTAGC 20
DB 793 CTGTTAAATGGCAGTCTAGC 812

```

RESULT 29
US-09-184-418C-51
; Sequence 51, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Peng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 51
; LENGTH: 2579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=tat
US-09-184-418C-51

```

Query Match 76.0%; Score 15.2; DB 1; Length 2579;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0

QY 1 CTGTTAAATGGCAGTCTAGC 20
|| ||||| |||||
Db 1193 CTAATAATGGTAGTCTAGC 1212

```

RESULT 30
US-09-184-418C-25
; Sequence 25, Application US/091844418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 25
; LENGTH: 2597
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=tat
US-09-184-418C-25

```

Query Match 76.0%; Score 15.2; DB 1; Length 2597;

Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches

QY 1 CTGTTAAATGGCAGCTTACC 20
||| ||| ||| ||| |||
Db 1166 CTCGTGAATGCAGATTACG 1185

```

RESULT 31
US-09-184-418C-33
; Sequence 33, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 33
; LENGTH: 2606
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=g9C0R56; gene=tat; CDS: join (5177..5391,
; OTHER INFORMATION: 7698..7782)
US-09-184-418C-33

```

Query Match 76.0%; Score 15.2; DB 1; Length 2606;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0

QY 1 CTGTTAAATGGCAGTCTAGC 20
DB 1157 CTATTTAAATGGAAGCCTAGC 1176

```

RESULT 32
US-09-184-418C-68
; Sequence 68, Application US/091844418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 68
; LENGTH: 2643
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=tat
US-09-184-418C-68

```

Query Match 76.0%; Score 15.2; DB 1; Length 2643;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0

Qy 1 CTGTTAAATGGCAGTCTAGC 20
|||
Db 1191 CTGTTAAATGGAAGCTTAGC 1210

RESULT 33
US-09-184-418C-52


```
; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2645
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=rev
US-09-184-418C-52

Query Match          76.0%; Score 15.2; DB 1; Length 2645;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      1054 CTACTAAATGGTAGTCTAGC 1073
      || ||||| ||||| |||||
RESULT 34
US-09-184-418C-34
; Sequence 34, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 34
; LENGTH: 2657
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=rev; CDS: join(5316..5391,
; OTHER INFORMATION: 7698..7972)
US-09-184-418C-34

Query Match          76.0%; Score 15.2; DB 1; Length 2657;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      1018 CTATTAAATGGAGCGCTAGC 1037
      || ||||| ||||| |||||
RESULT 35
US-09-184-418C-26
; Sequence 26, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2663
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=rev
US-09-184-418C-26

Query Match          76.0%; Score 15.2; DB 1; Length 2663;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      1027 CTGCTGAATGGCAGTTTAGC 1046
      || ||||| ||||| |||||
RESULT 36
US-09-184-418C-69
; Sequence 69, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 69
; LENGTH: 2688
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=rev
US-09-184-418C-69

Query Match          76.0%; Score 15.2; DB 1; Length 2688;
Best Local Similarity 85.0%; Pred. No. 6.1;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      1052 CTGTTAAATGGAGGCTTAGC 1071
      || ||||| ||||| |||||
RESULT 37
US-09-184-418C-3
; Sequence 3, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 3
; LENGTH: 8953
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="90CR056"; 137..1639:gene="gag"; 4388..4966:gene="vif";
; OTHER INFORMATION: 4906..5196:gene="vpr"; 5177..7782:gene="tat";
; OTHER INFORMATION: 5316..7972:gene="rev"; 5408..5650:gene="vpu";
; OTHER INFORMATION: 5377..8114:gene="env"; 8117..8737:gene="nef";
```

```
US-09-184-418C-3
Query Match          76.0%; Score 15.2; DB 1; Length 8953;
Best Local Similarity 85.0%; Pred. No. 5.3;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20
   ||||| |||||
Db 6333 CTATTAAATGGAAGCCCTAGC 6352

RESULT 38
US-09-184-418C-5
; Sequence 5, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 5
; LENGTH: 8966
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="92NG003"; 157..1650:gene:"gag"; 4408..4986:gene:"vif";
; OTHER INFORMATION: 4926..5039:gene:"vpr"; 5184..752:tat;
; OTHER INFORMATION: 5323..7967:gene:"rev"; 5425..5654:gene:"vpu";
; OTHER INFORMATION: 5572..8109:gene:"env"; 8111..8731:gene:"nef"
US-09-184-418C-5

Query Match          76.0%; Score 15.2; DB 1; Length 8966;
Best Local Similarity 85.0%; Pred. No. 5.3;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20
   ||||| |||||
Db 6376 CTACTAAATGTAGTCTAGC 6395

RESULT 39
US-09-184-418C-2
; Sequence 2, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 2
; LENGTH: 8987
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="92NG083"; 156..362:gag; 1727..4465:pol;
; OTHER INFORMATION: 4410..4988:vif; 4928..5218:vpr; 5199..7795:tat;
; OTHER INFORMATION: 5338..8000:rev; 5440..5466:vpu; 5593..8142:env;
; OTHER INFORMATION: 8144..8767:nef
US-09-184-418C-2

Query Match          76.0%; Score 15.2; DB 1; Length 8987;
Best Local Similarity 85.0%; Pred. No. 5.3;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

US-09-184-418C-7
; Sequence 7, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 7
; LENGTH: 9050
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="94CY032.3"; 156..1658:"gag"; 1454..4462:"pol";
; OTHER INFORMATION: 4407..4985:"vif"; 4925..5212:"vpr"; 5200..7842:"tat";
; OTHER INFORMATION: 5339..8026:"rev"; 5435..5680:"vpu"; 5598..8168:"env";
; OTHER INFORMATION: 8170..8829:"nef"
US-09-184-418C-7

Query Match          76.0%; Score 15.2; DB 1; Length 9050;
Best Local Similarity 85.0%; Pred. No. 5.3;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGCTAGC 20
   ||||| |||||
Db 6390 CTGTTAAATGGAAGCTTAGC 6409

RESULT 41
US-09-184-418C-71/c
; Sequence 71, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 71
; LENGTH: 2571
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="94CY032.3; gene-env
US-09-184-418C-71

Query Match          69.0%; Score 13.8; DB 1; Length 2571;
Best Local Similarity 88.2%; Pred. No. 14;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 4 TTAATGGCAGCTAGC 20
   ||||| |||||
Db 554 TTAATGGCAGCTAGC 538

RESULT 42
US-09-184-418C-68/c
```

```
; Sequence 68, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 68
; LENGTH: 2643
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=tat
US-09-184-418C-68

Query Match          69.0%; Score 13.8; DB 1; Length 2643;
Best Local Similarity 88.2%; Pred. No. 14;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGTCTAGC 20
Db      952 TTAATGGCAGTCTAGC 936

RESULT 43
US-09-184-418C-69/c
; Sequence 69, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 69
; LENGTH: 2688
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=rev
US-09-184-418C-69

Query Match          69.0%; Score 13.8; DB 1; Length 2688;
Best Local Similarity 88.2%; Pred. No. 14;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGTCTAGC 20
Db      813 TTAATGGCAGTCTAGC 797

RESULT 44
US-09-184-418C-7/c
; Sequence 7, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
```

```
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 7
; LENGTH: 9050
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY032.3; 156..1658:"gag"; 1454..4462:"pol";
; OTHER INFORMATION: 4407..4985:"vif"; 4925..5212:"vpr"; 5200..7842:"tat";
; OTHER INFORMATION: 5339..8026:"rev"; 5435..5680:"vpu"; 5598..8168:"env";
; OTHER INFORMATION: 8170..8829:"nef"
US-09-184-418C-7

Query Match          69.0%; Score 13.8; DB 1; Length 9050;
Best Local Similarity 88.2%; Pred. No. 11;
Matches 15; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      4 TTAATGGCAGTCTAGC 20
Db      6151 TTAATGGCAGTCTAGC 6135

RESULT 45
US-09-184-418C-107
; Sequence 107, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 107
; LENGTH: 2574
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=env
US-09-184-418C-107

Query Match          68.0%; Score 13.6; DB 1; Length 2574;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      1 CTGTTAAATGGCAGTCTAGC 20
Db      769 CTGTTAAATGGTACGACAGC 788

RESULT 46
US-09-184-418C-104
; Sequence 104, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 104
; LENGTH: 2633
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=tat
US-09-184-418C-104
```

```
Query Match      68.0%; Score 13.6; DB 1; Length 2633;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    |||||
Db 1175 CTGTTAAATGGTAGCACAGC 1194

RESULT 47
US-09-184-418C-105
; Sequence 105, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 105
; LENGTH: 2651
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=rev
US-09-184-418C-105

Query Match      68.0%; Score 13.6; DB 1; Length 2651;
Best Local Similarity 80.0%; Pred. No. 16;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    |||||
Db 1036 CTGTTAAATGGTAGCACAGC 1055

RESULT 48
US-09-184-418C-11
; Sequence 11, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 11
; LENGTH: 8959
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; 138.1613:"gag";
; OTHER INFORMATION: 1418.4428:"pol"; 4361.4939:"vif"; 4879.5169:"vpr";
; OTHER INFORMATION: 5150.7782:"tat"; 5289.7939:"rev"; 5378.5638:"vpu";
; OTHER INFORMATION: 5556.8129:"env"; 8131.8754:"nef"
US-09-184-418C-11

Query Match      68.0%; Score 13.6; DB 1; Length 8959;
Best Local Similarity 80.0%; Pred. No. 13;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAGTCTAGC 20
    |||||
Db 6324 CTGTTAAATGGTAGCACAGC 6343
```

```
RESULT 49
US-09-184-418C-81
; Sequence 81, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 81
; LENGTH: 621
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: nef
US-09-184-418C-81

Query Match      53.0%; Score 10.6; DB 1; Length 621;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 3 GTTAATGGCAGTCTAG 19
    |||||
Db 15 GTCAAAAGCAGTATAG 31

RESULT 50
US-09-184-418C-32/c
; Sequence 32, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 32
; LENGTH: 624
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=nef
US-09-184-418C-32

Query Match      53.0%; Score 10.6; DB 1; Length 624;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 3 GTTAATGGCAGTCTAG 19
    |||||
Db 417 GGTCAAGGGAGTCTAG 401

RESULT 51
US-09-184-418C-90
; Sequence 90, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
```

```
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 90
; LENGTH: 624
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene=nef
US-09-184-418C-90
```

```
Query Match 53.0%; Score 10.6; DB 1; Length 624;
Best Local Similarity 76.5%; Pred. No. 1.1e+02;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 3 GTTAAATGGCAGCTCTAG 19
    ||||| ||||| |||
Db 15 GTCAAAACGAGTATAG 31
```

```
RESULT 52
US-09-184-418C-2/c
; Sequence 2, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 2
; LENGTH: 8987
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; 156.362:gag; 1727.4465:pol;
; OTHER INFORMATION: 4410.4988:vif; 4928.5218:vpr; 5199.7795:tat;
; OTHER INFORMATION: 5338.8000:rev; 5440.5466:vp1; 5593.8142:env;
; OTHER INFORMATION: 8144.8767:nef
US-09-184-418C-2
```

```
Query Match 53.0%; Score 10.6; DB 1; Length 8987;
Best Local Similarity 76.5%; Pred. No. 44;
Matches 13; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 3 GTTAAATGGCAGCTCTAG 19
    ||||| ||||| |||
Db 8560 GGTCAAGGGAGTCTAG 8544
```

```
RESULT 53
US-09-184-418C-108
; Sequence 108, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 108
; LENGTH: 624
; TYPE: DNA
```

```
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=nef
US-09-184-418C-108
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 624;
Best Local Similarity 70.0%; Pred. No. 1.2e+02;
Matches 14; Conservative 0; Mismatches 6; Indels 0; Gaps 0;
```

```
QY 1 CUGTTAAATGGCAGCTCTAGC 20
    ||||| ||||| |||||
Db 553 CAGTTTGACAGCGCTAGC 572
```

```
RESULT 54
US-09-184-418C-74
; Sequence 74, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 74
; LENGTH: 3000
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M651.8; gene=pol
US-09-184-418C-74
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 3000;
Best Local Similarity 91.7%; Pred. No. 81;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 6 AAATGGCAGTCT 17
    ||||| ||||| |||
Db 2663 AAATGGCAGTAT 2674
```

```
RESULT 55
US-09-184-418C-101
; Sequence 101, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 101
; LENGTH: 3011
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=pol
US-09-184-418C-101
```

```
Query Match 52.0%; Score 10.4; DB 1; Length 3011;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 6 AAATGGCAGTCT 17
    ||||| ||||| |||
```

```

Db      2662 AAATGGCAGTAT 2673

RESULT 56
US-09-184-418C-92
; Sequence 92, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 92
; LENGTH: 3012
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-pol
US-09-184-418C-92

Query Match      52.0%; Score 10.4; DB 1; Length 3012;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
      |||||
Db      2675 AAATGGCAGTAT 2686

RESULT 57
US-09-184-418C-83
; Sequence 83, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 83
; LENGTH: 3017
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene-pol
US-09-184-418C-83

Query Match      52.0%; Score 10.4; DB 1; Length 3017;
Best Local Similarity 91.7%; Pred. No. 80;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
      |||||
Db      2680 AAATGGCAGTAT 2691

RESULT 58
US-09-184-418C-30/C
; Sequence 30, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 30
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene-vif
US-09-184-418C-30

Query Match      49.0%; Score 9.8; DB 1; Length 579;
Best Local Similarity 84.6%; Pred. No. 1.7e+02;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      5 TAAATGGCAGTCT 17
      |||||
Db      243 TAAATGCCATTCT 231

RESULT 59
US-09-184-418C-57
; Sequence 57, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 57
; LENGTH: 3012
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; gene-pol; note=NH2-terminus
US-09-184-418C-57

Query Match      49.0%; Score 9.8; DB 1; Length 3012;
Best Local Similarity 84.6%; Pred. No. 1e+02;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAG 14
      |||||
Db      2265 TGATAATGTCAG 2277

RESULT 60
US-09-184-418C-48
; Sequence 48, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 48
; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1

```

```
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=gag-pol fusion
US-09-184-418C-48

Query Match      49.0%; Score 9.8; DB 1; Length 4307;
Best Local Similarity 84.6%; Pred. No. 84;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAG 14
Db      3560 TGATAATGTCAG 3572

RESULT 61
US-09-184-418C-3/c
; Sequence 3, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 3
; LENGTH: 8953
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="90CR056"; 137..1639:gene="gag"; 4388..4966:gene="vif";
; OTHER INFORMATION: 4906..5196:gene "vpr"; 5177..7782:gene="tat";
; OTHER INFORMATION: 5316..7972:gene="rev"; 5408..5650:gene="vpu";
; OTHER INFORMATION: 5577..8114:gene="env"; 8117..8737:gene="nef";
JS-09-184-418C-3

Query Match      49.0%; Score 9.8; DB 1; Length 8953;
Best Local Similarity 84.6%; Pred. No. 51;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      5 TAAATGGCAGTCT 17
Db      4630 TAAATGGCAGTCT 4618

RESULT 62
JS-09-184-418C-36/c
; Sequence 36, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 36
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=env
JS-09-184-418C-36

Query Match      48.0%; Score 9.6; DB 1; Length 2538;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1213 TTTTACATGGGAGTGT 1198

RESULT 65
US-09-184-418C-51/c
; Sequence 51, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
```

```
QY      4 TTAATGGCAGTCTAG 19
Db      764 TTTAATAGCAGTTGAG 749

RESULT 63
US-09-184-418C-54/c
; Sequence 54, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 54
; LENGTH: 2538
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=env
US-09-184-418C-54

Query Match      48.0%; Score 9.6; DB 1; Length 2538;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1204 TCTTACATGGGAGTGT 1189

RESULT 64
US-09-184-418C-28/c
; Sequence 28, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 28
; LENGTH: 2550
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=env
US-09-184-418C-28

Query Match      48.0%; Score 9.6; DB 1; Length 2550;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1213 TTTTACATGGGAGTGT 1198

RESULT 65
US-09-184-418C-51/c
; Sequence 51, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
```

```

; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 51
; LENGTH: 2579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=tat
US-09-184-418C-51

Query Match      48.0%; Score 9.6; DB 1; Length 2579;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTTAAATGGCAGTCT 17
Db      1592 TCTTACATGGGAGTGT 1577
      ||||| ||||| |||||
RESULT 66
US-09-184-418C-25/C
; Sequence 25, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 25
; LENGTH: 2597
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=tat
US-09-184-418C-25

Query Match      48.0%; Score 9.6; DB 1; Length 2597;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTTAAATGGCAGTCT 17
Db      1607 TTTTACATGGGAGTGT 1592
      ||||| ||||| |||||
RESULT 67
US-09-184-418C-33/C
; Sequence 33, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 33
; LENGTH: 2606
; TYPE: DNA

```

```

; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=tat; CDS: join (5177..5391,
; OTHER INFORMATION: 7698..7782)
US-09-184-418C-33

Query Match      48.0%; Score 9.6; DB 1; Length 2606;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      4 TTAATGGCAGTCTAG 19
Db      1164 TTTAATAGCAGTTGAG 1149
      ||||| ||||| |||||
RESULT 68
US-09-184-418C-52/C
; Sequence 52, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 52
; LENGTH: 2645
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=rev
US-09-184-418C-52

Query Match      48.0%; Score 9.6; DB 1; Length 2645;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCT 17
Db      1453 TCTTACATGGGAGTGT 1438
      ||||| ||||| |||||
RESULT 69
US-09-184-418C-34/C
; Sequence 34, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 34
; LENGTH: 2657
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=90CR056; gene=rev; CDS: join(5316..5391,
; OTHER INFORMATION: 7698..7972)
US-09-184-418C-34

Query Match      48.0%; Score 9.6; DB 1; Length 2657;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

```


QY 4 TTAATGGCAGTCTAG 19
||| ||| ||| ||| |||
Db 1025 TTTAATAGCAGTTGAG 1010

RESULT 70

US-09-184-418C-26/c
; Sequence 26, Application US/09184418C
; Patent No. 6492110

; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 26

; LENGTH: 2663

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=92NG083; gene=rev

US-09-184-418C-26

Query Match 48.0%; Score 9.6; DB 1; Length 2663;
Best Local Similarity 75.0%; Pred. No. 1.2e+02;

Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCT 17
||| ||| ||| ||| |||

Db 1468 TTTTACATGGGAGTGT 1453

RESULT 71

US-09-184-418C-101/c
; Sequence 101, Application US/09184418C
; Patent No. 6492110

; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 101

; LENGTH: 3011

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=94IN476.104; gene-pol

US-09-184-418C-101

Query Match 48.0%; Score 9.6; DB 1; Length 3011;
Best Local Similarity 75.0%; Pred. No. 1.1e+02;

Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
||| ||| ||| ||| |||

Db 1220 TCATTGACAGTCCAGC 1205

RESULT 72

US-09-184-418C-57/c
; Sequence 57, Application US/09184418C
; Patent No. 6492110

; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 83

; LENGTH: 3017

; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 57

; LENGTH: 3012

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=93BR029; gene-pol; note=NH2-terminus

; OTHER INFORMATION: uncertain

US-09-184-418C-57

Query Match 48.0%; Score 9.6; DB 1; Length 3012;
Best Local Similarity 75.0%; Pred. No. 1.1e+02;

Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
||| ||| ||| ||| |||

Db 1232 TCATTGACAGTCCAGC 1217

RESULT 73

US-09-184-418C-92/c

; Sequence 92, Application US/09184418C

; Patent No. 6492110

; GENERAL INFORMATION:

; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 92

; LENGTH: 3012

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=94CY017.41; gene-pol

US-09-184-418C-92

Query Match 48.0%; Score 9.6; DB 1; Length 3012;
Best Local Similarity 75.0%; Pred. No. 1.1e+02;

Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
||| ||| ||| ||| |||

Db 1232 TCATTGACAGTCCAGC 1217

RESULT 74

US-09-184-418C-83/c

; Sequence 83, Application US/09184418C

; Patent No. 6492110

; GENERAL INFORMATION:

; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 83

; LENGTH: 3017

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=94IN476.104; gene-pol

US-09-184-418C-101

```
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AM751.3; gene=pol
US-09-184-418C-83

Query Match      48.0%; Score 9.6; DB 1; Length 3017;
Best Local Similarity 75.0%; Pred. No. 1.1e-02;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 1238 TCATTGACAGTCCAGC 1223

RESULT 75
US-09-184-418C-48/c
; Sequence 48, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 48
; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=gag-pol fusion
US-09-184-418C-48

Query Match      48.0%; Score 9.6; DB 1; Length 4307;
Best Local Similarity 75.0%; Pred. No. 89;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2527 TCATTGACAGTCCAGC 2512

RESULT 76
US-09-184-418C-5/c
; Sequence 6, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 6
; LENGTH: 8954
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR029; 142..1579:gene="gag"; 1437..4448:gene="pol";
; OTHER INFORMATION: 4393..4971:gene="vif"; 4911..5201:gene="vpr";
; OTHER INFORMATION: 5182..7782:gene="tat"; 5321..7972:gene="rev";
; OTHER INFORMATION: 5586..8114:gene="env"; 8116..8736:gene="nef"
US-09-184-418C-6

Query Match      48.0%; Score 9.6; DB 1; Length 8954;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2527 TCATTGACAGTCCAGC 2512

RESULT 77
US-09-184-418C-11/c
; Sequence 11, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 11
; LENGTH: 8959
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; 138.1613:"gag";
; OTHER INFORMATION: 1418.4428:"pol"; 4361.4939:"vif"; 4879.5169:"vpr";
; OTHER INFORMATION: 5150.7782:"tat"; 5289.7939:"rev"; 5378.5638:"vpu";
; OTHER INFORMATION: 5556.8129:"env"; 8131.8754:"nef"
US-09-184-418C-11

Query Match      48.0%; Score 9.6; DB 1; Length 8959;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
   ||| ||||| |||
Db 2637 TCATTGACAGTCCAGC 2622

RESULT 78
US-09-184-418C-5/c
; Sequence 5, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 5
; LENGTH: 8966
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate="92NG003"; 157..1650:gene="gag"; 4408..4986:gene="vif";
; OTHER INFORMATION: 4926..5039:gene="vpr"; 5184.7762:tat;
; OTHER INFORMATION: 5323..7967:gene="rev"; 5425..5654:gene="vpu";
; OTHER INFORMATION: 5572..8109:gene="env"; 8111..8731:gene="nef"
US-09-184-418C-5

Query Match      48.0%; Score 9.6; DB 1; Length 8966;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCT 17
   ||| ||||| |||
Db 6775 TCTTACATGGGAGTCT 6760
```

```

RESULT 79
US-09-184-418C-1/c
; Sequence 1, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 1
; LENGTH: 8968
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369.4947:vif;
; OTHER INFORMATION: 4887.5177:vpr; 5158.7767:tat; 5297.7957:rev;
; OTHER INFORMATION: 5396.5641:vpu; 5559.8099:env; 8101.8727:nef
US-09-184-418C-1
Query Match 48.0%; Score 9.6; DB 1; Length 8968;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2644 TCATTGACAGTCCAGC 2629

RESULT 80
US-09-184-418C-9/c
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM751.3; 137.1632:gag; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9
Query Match 48.0%; Score 9.6; DB 1; Length 8972;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2656 TCATTGACAGTCCAGC 2641

RESULT 81
US-09-184-418C-4/c
; Sequence 4, Application US/09184418C
; Patent No. 6492110

```

```

; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; 139.1624:gag; 1690.4428:pol(N-terminus uncer
; OTHER INFORMATION: 4373.4951:vif; 4891.5181:vpr; 5162.7801:tat; 5301.7958:rev;
; OTHER INFORMATION: 5403.5648:vpu; 5566.8148:env; 8150.8773:nef
US-09-184-418C-4
Query Match 48.0%; Score 9.6; DB 1; Length 8992;
Best Local Similarity 75.0%; Pred. No. 52;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2648 TCATTGACAGTCCAGC 2633

RESULT 82
US-09-184-418C-10/c
; Sequence 10, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 10
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:gag;
; OTHER INFORMATION: 1442.4453:pol; 4398.4976:vif; 4916.5206:vpr;
; OTHER INFORMATION: 5187.7841:tat; 5326.8046:rev;
; OTHER INFORMATION: 5428.5673:vpu; 5591.8188:env; 8190.8843:nef
US-09-184-418C-10
Query Match 48.0%; Score 9.6; DB 1; Length 9060;
Best Local Similarity 75.0%; Pred. No. 51;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2673 TCATTGACAGTCCAGC 2658

RESULT 83
US-09-184-418C-108/c
; Sequence 108, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 108
; LENGTH: 9060
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; 159.1649:gag;
; OTHER INFORMATION: 1442.4453:pol; 4398.4976:vif; 4916.5206:vpr;
; OTHER INFORMATION: 5187.7841:tat; 5326.8046:rev;
; OTHER INFORMATION: 5428.5673:vpu; 5591.8188:env; 8190.8843:nef
US-09-184-418C-108
Query Match 48.0%; Score 9.6; DB 1; Length 9060;
Best Local Similarity 75.0%; Pred. No. 51;
Matches 12; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 5 TAAATGGCAGTCTAGC 20
| | | | | | | | | |
Db 2673 TCATTGACAGTCCAGC 2658

```

```
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 108
; LENGTH: 624
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=nef
US-09-184-418C-108

Query Match      47.0%; Score 9.4; DB 1; Length 624;
Best Local Similarity 68.4%; Pred. No. 2e+02;
Matches 13; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

QY 1 CTTTAAATGGCAGCTAG 19
   ||||| |||||
Db 280 CTTTAAAGAGGCGAG 262

RESULT 84
US-09-184-418C-66/c
; Sequence 66, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 66
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CT032.3; gene=vif
US-09-184-418C-66

Query Match      46.0%; Score 9.2; DB 1; Length 579;
Best Local Similarity 78.6%; Pred. No. 2.3e+02;
Matches 11; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 6 AATGCGCAGCTCTAG 19
   ||||| |||||
Db 242 AATGCCAGCTCTTG 229

RESULT 85
US-09-184-418C-44/c
; Sequence 44, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 44
; LENGTH: 2583
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=env
US-09-184-418C-44
```

```
Query Match      46.0%; Score 9.2; DB 1; Length 2583;
Best Local Similarity 78.6%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAG 14
   |||| |
Db 612 CTGTGTAATGGCTG 599

RESULT 86
US-09-184-418C-41/c
; Sequence 41, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 41
; LENGTH: 2640
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=tat
US-09-184-418C-41

Query Match      46.0%; Score 9.2; DB 1; Length 2640;
Best Local Similarity 78.6%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAG 14
   |||| |
Db 1016 CTGTGTAATGGCTG 1003

RESULT 87
US-09-184-418C-42/c
; Sequence 42, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 42
; LENGTH: 2658
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=rev
US-09-184-418C-42

Query Match      46.0%; Score 9.2; DB 1; Length 2658;
Best Local Similarity 78.6%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 CTGTTAAATGGCAG 14
   |||| |
Db 877 CTGTGTAATGGCTG 864

RESULT 88
```

US-09-184-418C-21/c
 ; Sequence 21, Application US/09184418C
 ; Patent No. 6492110
 ; GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
 TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 21

LENGTH: 207

TYPE: DNA

ORGANISM: Human immunodeficiency virus type 1

FEATURE:

OTHER INFORMATION: isolate=92NG083; gene=gag

US-09-184-418C-21

Query Match 45.0%; Score 9; DB 1; Length 207;

Best Local Similarity 70.6%; Pred. No. 3.1e+02;

Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

1 CTGTTAAATGGCAGTCT 17

|||||

143 CGGTTAAGTCAAATCT 127

RESULT 89

US-09-184-418C-40

Sequence 40, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
 TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 40

LENGTH: 291

TYPE: DNA

ORGANISM: Human immunodeficiency virus type 1

FEATURE:

OTHER INFORMATION: isolate=92RW009; gene=vpr

US-09-184-418C-40

Query Match 45.0%; Score 9; DB 1; Length 291;

Best Local Similarity 70.6%; Pred. No. 2.9e+02;

Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

4 TTAATGGCAGTCTAGC 20

|||||

66 TTTAGAGGCACTCAAGC 82

RESULT 90

US-09-184-418C-63

Sequence 63, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
 TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02
 ; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 63

; LENGTH: 621

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=93BR029; gene=nef

US-09-184-418C-63

Query Match 45.0%; Score 9; DB 1; Length 621;

Best Local Similarity 70.6%; Pred. No. 2.5e+02;

Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

3 GTTAAATGGCAGTCTAG 19

|||||

15 GTCAAAAGTAGTATAG 31

RESULT 91

US-09-184-418C-32

Sequence 32, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
 TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 32

LENGTH: 624

TYPE: DNA

ORGANISM: Human immunodeficiency virus type 1

FEATURE:

OTHER INFORMATION: isolate=92NG083; gene=nef

US-09-184-418C-32

Query Match 45.0%; Score 9; DB 1; Length 624;

Best Local Similarity 70.6%; Pred. No. 2.5e+02;

Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

4 TTAATGGCAGTCTAGC 20

|||||

556 TTTACAGTAGCCTAGC 572

RESULT 92

US-09-184-418C-45

Sequence 45, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
 TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 45

LENGTH: 624

TYPE: DNA

ORGANISM: Human immunodeficiency virus type 1

FEATURE:

OTHER INFORMATION: isolate=92RW009; gene=nef

US-09-184-418C-45

Query Match 45.0%; Score 9; DB 1; Length 624;

```
Best Local Similarity 70.6%; Pred. No. 2.5e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 3 GTTAAATGCGAGTCTAG 19
Db 15 GTCAAAATGATGTCAG 31

RESULT 93
US-09-184-418C-100
; Sequence 100, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 100
; LENGTH: 1476
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-94IN476.104; gene=gag
US-09-184-418C-100

Query Match 45.0%; Score 9; DB 1; Length 1476;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1152 TGTAAATG 1160

RESULT 94
US-09-184-418C-12
; Sequence 12, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 12
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-93BR020; gene=gag
US-09-184-418C-12

Query Match 45.0%; Score 9; DB 1; Length 1479;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1152 TGTAAATG 1160

RESULT 95
US-09-184-418C-82
; Sequence 82, Application US/09184418C
```

```
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 82
; LENGTH: 1496
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-96ZM751.3; gene=gag
US-09-184-418C-82

Query Match 45.0%; Score 9; DB 1; Length 1496;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1154 TGTAAATG 1162

RESULT 96
US-09-184-418C-29
; Sequence 29, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 29
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate-90CR056; gene=gag; CDS:
; OTHER INFORMATION: Join(137..1434,1434..4443)
US-09-184-418C-29

Query Match 45.0%; Score 9; DB 1; Length 1503;
Best Local Similarity 100.0%; Pred. No. 1.9e+02;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 TGTAAATG 10
Db 1170 TGTAAATG 1178

RESULT 97
US-09-184-418C-89/c
; Sequence 89, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
```

```

; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 89
; LENGTH: 2544
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AW751.3; gene-env
US-09-184-418C-89

Query Match          45.0%; Score 9; DB 1; Length 2544;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 4 TTAATGGCAGTCTAGC 20
    |||| ||| | | | |
Db 557 TTAATGGTACTATATC 541
    |||| ||| | | | |

RESULT 98
US-09-184-418C-98/c
; Sequence 98, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 98
; LENGTH: 2598
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-env
US-09-184-418C-98

Query Match          45.0%; Score 9; DB 1; Length 2598;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCTA 18
    |||| ||| | | | |
Db 1040 TGTAAAGTGTCTATCCA 1024
    |||| ||| | | | |

RESULT 99
US-09-184-418C-87/c
; Sequence 87, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 87
; LENGTH: 2631
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; gene-rev
US-09-184-418C-87

Query Match          45.0%; Score 9; DB 1; Length 2631;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;

US-09-184-418C-86/c
; Sequence 86, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 86
; LENGTH: 2646
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96AW751.3; gene-tat
US-09-184-418C-86

Query Match          45.0%; Score 9; DB 1; Length 2646;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 4 TTAATGGCAGTCTAGC 20
    |||| ||| | | | |
Db 973 TTAATGGTACTATATC 957
    |||| ||| | | | |

RESULT 101
US-09-184-418C-95/c
; Sequence 95, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 95
; LENGTH: 2655
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene-tat
US-09-184-418C-95

Query Match          45.0%; Score 9; DB 1; Length 2655;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 2 TGTAAATGGCAGTCTA 18
    |||| ||| | | | |
Db 1444 TGTAAAGTGTCTATCCA 1428
    |||| ||| | | | |

RESULT 102
US-09-184-418C-96/c
; Sequence 96, Application US/09184418C
; Patent No. 6492110
```

```
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 96
; LENGTH: 2721
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94CY017.41; gene=rev
US-09-184-418C-96

Query Match          45.0%; Score 9; DB 1; Length 2721;
Best Local Similarity 70.6%; Pred. No. 1.4e+02;
Matches 12; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY      2 TGTAAATGGCAGTCTA 18
        ||| || || || || ||
Db      1305 TGTAAAGTGTCAATCCA 1289

RESULT 103
US-09-184-418C-23/c
; Sequence 23, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 23
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG083; gene=vif
US-09-184-418C-23

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        || || || || || ||
Db      242 AAATGGCAGTCT 231

RESULT 104
US-09-184-418C-39/c
; Sequence 39, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 39
```

```
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RW009; gene=vif
US-09-184-418C-39

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        || || || || || ||
Db      242 AAATGCCAATCT 231

RESULT 105
US-09-184-418C-49/c
; Sequence 49, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 49
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92NG003; gene=vif
US-09-184-418C-49

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY      6 AAATGGCAGTCT 17
        || || || || || ||
Db      242 AAGTCCCAATCT 231

RESULT 106
US-09-184-418C-75
; Sequence 75, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 75
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM651.8; gene=vif
US-09-184-418C-75

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
```



```
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=vif
US-09-184-418C-102

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 9 TGGCAGCTCTAGC 20
   ||||| |||
Db 305 TGGCAGACCAGC 316

RESULT 112
US-09-184-418C-102/c
; Sequence 102, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 102
; LENGTH: 579
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=vif
US-09-184-418C-102

Query Match          44.0%; Score 8.8; DB 1; Length 579;
Best Local Similarity 83.3%; Pred. No. 2.8e+02;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 6 AAATGGCAGCTCT 17
   ||||| |||
Db 242 AAATGCCAATCT 231
```

Search completed: September 11, 2003, 15:02:08
Job time : 5 secs